Shadow libraries

- Shadow or mirror libraries are online databases that duplicate digital records like e-books or academic articles.

- Shadow libraries are online databases of readily available content that is normally obscured or otherwise not readily accessible.

- Such content may be inaccessible for a number of reasons, including the use of paywalls, copyright controls, or other barriers to accessibility placed upon the content by its original owners.

- Shadow libraries usually consist of textual information like in electronic books but may also include other digital media, including software, music, or films.

- Examples of shadow libraries include Library Genesis, Z-Library, and Sci-Hub, which are popular academic shadow libraries.

THE HINDU

National list of essential medicine

- On September 13, the National List of Essential Medicines (NLEM), 2022, was released, with 384 drugs in it across 27 categories. While 34 new drugs are on the list, 26 drugs from NLEM, 2015.

- What is an Essential Medicines List?

- As per the World Health Organisation (WHO), Essential Medicines are those that satisfy the priority health care needs of the population.

- The list is made with consideration to disease prevalence, efficacy, safety and comparative cost-effectiveness of the medicines. Such medicines are intended to be available in adequate amounts, in appropriate dosage forms and strengths with assured quality.

- They should be available in such a way that an individual or community can afford.

- Drawing an essential medicines list (EML) is expected to result in better quality of medical care, better management of medicines and cost-effective use of health care resources.

- Criteria for inclusion of a medicine in NLEM 2015

The criteria are as follows

- The medicine should be approved/licensed in India.

- The medicine should be useful in disease which is a public health problem in India.

- The medicine should have proven efficacy and safety profile based on valid scientific evidence.

- The medicine should be cost effective.
- The medicine should be aligned with the current treatment guidelines for the disease.
- The medicine should be stable under the storage conditions in India.
- When more than one medicine are available from the same therapeutic class, preferably one prototype/ medically best suited medicine of that class to be included after due deliberation and careful evaluation of their relative safety, efficacy, cost-effectiveness.
- The price of total treatment is to be considered and not the unit price of a medicine.
- Fixed Dose Combinations (FDCs) are generally not included unless the combination has unequivocally proven advantage over individual ingredients administered separately, in terms of increasing efficacy, reducing adverse effects and/or improving compliance.
- The listing of medicine in NLEM is based according to the level of health care, i.e. Primary (P), Secondary (S) and Tertiary (T) because the treatment facilities, training, experience and availability of health care personnel differ at these levels.

- Criteria for deletion of a medicine from NLEM 2015
- The medicine has been banned in India.
- There are reports of concerns on the safety profile of a medicine.
- A medicine with better efficacy or favourable safety profiles and better cost-effectiveness is now available.
- The disease burden for which a medicine is indicated is no longer a national health concern in India.
- In case of antimicrobials, if the resistance pattern has rendered a medicine ineffective in Indian context.

Fighting back: A Ukrainian soldier helps a wounded fellow fighter on the road in the recaptured territory of the Kharkiv region. ■ AP

Dolo and ethics

- Recently, a controversy bubbled up regarding the marketing strategies of Micro Labs, a Bengaluru-based pharmaceutical company. Micro Labs, the maker of Dolo-650, was charged of having bribed medical doctors with freebies worth ₹1,000 crore in one year to promote Dolo-650.
- Dolo is an analgesic and antipyretic
- Analgesics are medications that relieve pain
- Antipyretic: Something that reduces fever.
- There's more. Para 1.5 of the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002 states that every physician should, as far as possible, prescribe drugs with generic names.
- It also states that there is both a rational prescription and use of pharmaceutical drugs.
- This is, of course, rarely done and there is no enforcement.
- This regulation also prohibits the disbursement of gifts.
- The solution is two-fold. First, a move to prescriptions without brand names should be the default practice.
- Doctors will then have no incentive to promote particular brands and

pharmaceutical companies will have no incentive to give freebies to doctors.
- But even if doctors are not able to recommend a certain brand, pharmacists are.
- And their incentive is to recommend brands that give them the highest trade margins, which are based on the maximum retail price (MRP)

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Water crisis

- The UNESCO United Nations World Water Development Report of 2022 has encapsulated global concern over the sharp rise in freshwater withdrawal from streams, lakes, aquifers and human-made reservoirs, impending water stress and also water scarcity being experienced in different parts of the world.
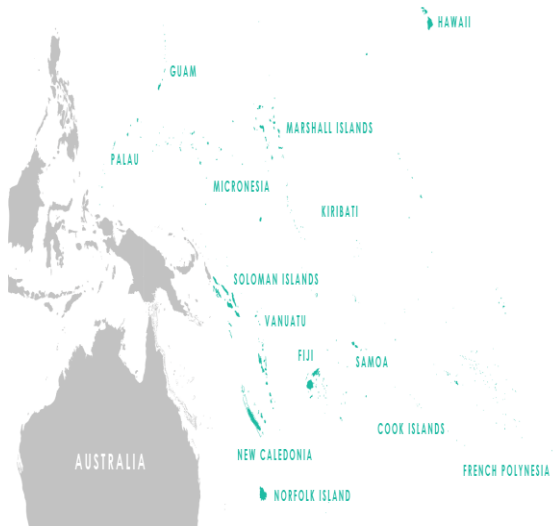
Growing water stress

- Further, the Water Scarcity Clock, an interactive webtool, shows that over two billion people live in countries now experiencing high water stress; the numbers will continue to increase.
- The Global Drought Risk and Water Stress map (2019) shows that major parts of India, particularly west,

central, and parts of peninsular India are highly water-stressed and experience water scarcity.

- A NITI Aayog report, 'Composite Water Management Index' (2018) has sounded a note of caution about the worst water crisis in the country, with more than 600 million people facing acute water shortages.

- The typical response of the areas where water shortage or scarcity is high includes transfer of water from the hinterlands/upper catchments or drawing it from stored surface water bodies or aquifers.

- This triggers sectoral and regional competition; rural-urban transfer of water is one such issue of global concern.

- Increasing trans-boundary transfer of water between rural and urban areas has been noted in many countries since the early 20th century.

Urban water use

- According to Census 2011, the urban population in India accounted for 34% of total population distributed in 7,935 towns of all classes.

- It is estimated that the urban population component in India will cross the 40% mark by 2030 and the 50% mark by 2050 (World Urbanization Prospects, 2018).

- The urban population accounted for 50% of the total world population by the end of the last century.

- Examining the urban water management trajectory, it is evident that in the initial stages when a city is small, it is concerned only with water supply; in a majority of cases, water is sourced locally, with groundwater meeting the bulk of the supply.

- As the city grows and water management infrastructures develop, dependence shifts to surface water.

- Available studies covering Nagpur and Chennai indicate the imminent problem of rural-urban water disputes that the country is going to face in the not-so-distant future as water scarcity grows, which will be further exacerbated by climate change.

- Institutional strengthening can offer entry points and provide opportunities to build flexibility into water resource allocation at a regional level, enabling adjustments in rapidly urbanizing regions.

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